

IN THE CLAIMS

Claims 1-11 (Cancelled)

Claim 12 (Currently Amended): A method for controlling a temperature of a fuel cell assembly, the method comprising:

measuring the operating temperature of the fuel cell assembly in contact with a thermoelectric layer; and

adjusting a voltage of a power source in response to the measured temperature to heat or cool the fuel cell assembly in contact with the thermoelectric layer, wherein the thermoelectric layer comprises one or more thermoelectric devices in electrical communication with the power source, the thermoelectric layer actively heats or actively cools the fuel cell assembly in contact with the thermoelectric layer, and wherein a heat distribution of the fuel cell assembly is substantially uniform.

Claim 13 (Original): The method according to claim 12, wherein the thermoelectric devices are Peltier devices.

Claim 14 (Original): The method according to claim 12, wherein the power source is a battery.

Claim 15 (Original): The method according to claim 12, wherein the power source is the fuel cell assembly.

Claim 16 (Original): The method according to claim 12, wherein the fuel cell assembly is selected from the group consisting of proton exchange membrane fuel cell, phosphoric acid fuel cell, molten carbonate fuel cell, solid oxide fuel cell and alkaline fuel cell.

Claim 17 (Previously Presented): The method according to claim 12, further comprising contacting a periphery of the fuel cell assembly with a heat sink.

Claim 18 (Currently Amended): A method of controlling a temperature of a fuel cell stack, comprising:

providing one or more thermoelectric layers in between adjacent fuel cell assemblies in the fuel cell stack, wherein each thermoelectric layer is adjacent to a fuel cell assembly, wherein each thermoelectric layer is in contact with at least one fuel cell assembly and wherein the thermoelectric layers each comprise one or more thermoelectric devices, each thermoelectric device in electrical communication with a power source;

providing a heat sink in thermal contact with a periphery of the fuel cell stack;

measuring the operating temperature of fuel cell assemblies adjacent to the thermoelectric layers at one or more locations across the fuel cell assemblies; and

adjusting the voltage of the power source in response to the measured temperatures to heat or cool the temperature of the at least one fuel cell assembly in contact with the thermoelectric layer at the one or more locations of the fuel cell stack, the thermoelectric layer actively heats or actively cools the fuel cell assembly in contact with the thermoelectric layer, wherein a heat distribution of the fuel cell assembly is substantially uniform.

Claim 19 (Previously Presented): The method according to claim 18, wherein each thermoelectric layer further comprises one or more temperature-sensing devices each associated with one or more thermoelectric devices and connected via control circuitry to the power sources to which the associated thermoelectric devices are connected.

Claim 20 (Previously Presented): The method according to claim 18, wherein the thermoelectric devices are Peltier devices.

Claim 21 (Previously Presented): The method according to claim 19, wherein the temperature sensing devices are thermocouples.

Claim 22 (Previously Presented): The method according to claim 18, wherein the power source is a battery.

Claim 23 (Previously Presented): The method according to claim 18, wherein the power source is a fuel cell.

Claim 24 (Previously Presented): The method according to claim 18, wherein the fuel cell assembly comprises a plurality of stacked fuel cells selected from the group consisting of a proton exchange membrane fuel cell, a phosphoric acid fuel cell, a molten carbonate fuel cell, a solid oxide fuel cell, and an alkaline fuel cell.

Claim 25 (Previously Presented): The method according to claim 18, wherein the temperature is substantially uniform across the fuel cell assembly.

Claim 26 (Previously Presented): The method according to claim 12, further comprising measuring the start-up temperature of the fuel cell assembly in contact with a thermoelectric layer; and

adjusting the voltage of the power source in response to the measured temperature to heat the fuel cell assembly.

Claim 27 (Previously Presented): The method according to claim 12, further comprising measuring the operating temperature of the fuel cell assembly adjacent to the thermoelectric layer at one or more locations across the fuel cell assembly; and adjusting the voltage of the power source in response to the measured temperature to cool the fuel cell assembly.

Claim 28 (Previously Presented): The method according to claim 12, further comprising measuring the operating temperature of the fuel cell assembly adjacent to the thermoelectric layer at one or more locations across the fuel cell assembly; and adjusting the voltage of the power source in response to the measured temperature to heat and cool the fuel cell assembly.